

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (Cancelled).

Claim 9 (Currently Amended): The apparatus of claim 44, wherein the satellite droplets are ~~directed~~ offset along the vertically vertical axis enough to be separated from the main drop on the media.

Claim 10 (Previously presented): The apparatus of claim 44, wherein printing laterally in either direction produces main drops and satellite droplets with nearly equal combined areas on the media.

Claims 11-29 (Cancelled).

Claim 30 (Currently Amended): The method of claim 46, wherein the satellite droplets are ~~directed vertically~~ offset along the vertical axis enough to be separated from the main drop on the media.

Claim 31 (Previously presented): The method of claim 46, wherein printing laterally in either direction produces main drops and satellite droplets with nearly equal combined areas on the media.

Claims 32-43 (Cancelled).

Claim 44 (Currently Amended): Apparatus including a printhead for an inkjet printer, the printhead comprising: an ink reservoir; nozzles for ejecting ink from the ink reservoir onto print media, the nozzles being formed in the ink jet printer printhead in a predetermined fashion with bores purposefully shaped and/or directed to determine the formation and placement of satellite droplets when ink is ejected from the ink reservoir when the printhead is part of an inkjet printer;

wherein: (a) each of the nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a

first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) when ink is ejected through the nozzles, each of the satellite droplets ejected through the first plurality of the nozzles is offset from the main drop ejected through the first plurality of the nozzles in substantially the same direction and at substantially the same distance; and

wherein the inkjet print head travels laterally while printing, and the satellite droplets are ~~vertically~~ offset on a vertical axis from the main drops.

Claim 45 (Previously Presented): Apparatus including a printhead for an inkjet printer, the printhead comprising: an ink reservoir; nozzles for ejecting ink from the ink reservoir onto print media, the nozzles being formed in the ink jet printer printhead in a predetermined fashion with bores purposefully shaped and/or directed to determine the formation and placement of satellite droplets when ink is ejected from the ink reservoir when the printhead is part of an inkjet printer;

wherein: (a) each of the nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) a second plurality of the nozzles have the axes of their bores aligned in a second direction, (f) a heater is used to eject ink through the nozzles, and each heater ejects ink through a first nozzle from the first plurality of nozzles and a second nozzle from the second plurality of nozzles, (g) the nozzles are aligned and directed such that when ink is ejected through the nozzles, satellite droplets ejected through the first plurality of the nozzles are offset from the main drops ejected through the first plurality of the nozzles in a different direction from which satellite droplets ejected through the second plurality of the nozzles are offset from the main drops ejected through the second plurality of the nozzles, such that: in a first direction of printing, the main drop from the first nozzle associated with a heater at least partially overlaps the satellite droplet from that nozzle and at least partially overlaps the satellite droplet from the second nozzle associated with that heater, and in a second direction of printing, the main drop from the second nozzle associated with a heater at least partially overlaps the satellite droplet from that nozzle and at least partially overlaps the satellite droplet from the first nozzle associated with that heater.

Claim 46 (Currently Amended): A method of controlling the formation and placement of satellite droplets ejected from an ink jet printer printhead comprising the steps of: providing an ink jet printer printhead having an ink reservoir; forming nozzles in the ink jet printer

printhead; installing the printhead in an ink jet printer; ejecting ink from the reservoir through the nozzles in the form of main drops and satellite droplets in a manner to achieve uniform density control by controlling the formation and placement of satellite droplets when ink is ejected from the reservoir of the ink jet printer printhead when the printhead is part of an inkjet printer;

wherein: (a) each of the nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) when ink is ejected through the nozzles, each of the satellite droplets ejected through the first plurality of the nozzles is offset from the main drop ejected through the first plurality of the nozzles in substantially the same direction and at substantially the same distance; and

wherein the inkjet print head travels laterally while printing, and the satellite droplets are ~~vertically~~ offset along a vertical axis from the main drops.

Claim 47 (Previously Presented): A method of controlling the formation and placement of satellite droplets ejected from an ink jet printer printhead comprising the steps of: providing an ink jet printer printhead having an ink reservoir; forming nozzles in the ink jet printer printhead; installing the printhead in an ink jet printer; ejecting ink from the reservoir through the nozzles in the form of main drops and satellite droplets in a manner to achieve uniform density control by controlling the formation and placement of satellite droplets when ink is ejected from the reservoir of the ink jet printer printhead when the printhead is part of an inkjet printer;

wherein: (a) each of the nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) a second plurality of the nozzles have the axes of their bores aligned in a second direction, (f) a heater is used to eject ink through the nozzles, and each heater ejects ink through a first nozzle from the first plurality of nozzles and a second nozzle from the second plurality of nozzles, (g) the nozzles are aligned and directed such that when ink is ejected through the nozzles, satellite droplets ejected through the first plurality of the nozzles are offset from the main drops ejected through the first plurality of the nozzles in a different direction from which satellite droplets ejected through the second plurality of the nozzles are offset from the main drops ejected through the second plurality of the nozzles, such that: in a first direction of printing, the main drop from the first nozzle associated with a heater at least partially

overlaps the satellite droplet from that nozzle and at least partially overlaps the satellite droplet from the second nozzle associated with that heater, and in a second direction of printing, the main drop from the second nozzle associated with a heater at least partially overlaps the satellite droplet from that nozzle and at least partially overlaps the satellite droplet from the first nozzle associated with that heater.

Claims 48-49 (Cancelled).

Claim 50 (New): Apparatus including a printhead for an inkjet printer, the printhead comprising: an ink reservoir; nozzles for ejecting ink from the ink reservoir onto print media, the nozzles being formed in the ink jet printer printhead in a predetermined fashion with bores purposefully shaped and/or directed to determine the formation and placement of satellite droplets when ink is ejected from the ink reservoir when the printhead is part of an inkjet printer;

wherein ink is ejected through each nozzle at a fire point and wherein: (a) each of the nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) when ink is ejected through the nozzles, each of the satellite droplets ejected through the first plurality of the nozzles is offset from the main drop ejected through the first plurality of the nozzles in substantially the same direction and at substantially the same distance; (f) a second plurality of the nozzles have the axes of their bores aligned in a second direction, and (g) when ink is ejected through the nozzles, the main drops ejected through the first plurality of the nozzles are offset in a different direction from the fire point from which main drops ejected through the second plurality of the nozzles are offset from the fire point.

Claim 51 (New): A method of controlling the formation and placement of satellite droplets ejected from an ink jet printer printhead comprising the steps of: providing an ink jet printer printhead having an ink reservoir; forming nozzles in the ink jet printer printhead; installing the printhead in an ink jet printer; ejecting ink from the reservoir through the nozzles in the form of main drops and satellite droplets in a manner to achieve uniform density control by controlling the formation and placement of satellite droplets when ink is ejected from the reservoir of the ink jet printer printhead when the printhead is part of an inkjet printer;

wherein ink is ejected through each nozzle at a fire point and wherein: (a) each of the

nozzles produces a main drop and a satellite droplet when ink is ejected through the nozzles, (b) each nozzle includes a bore, (c) each bore has an axis, (d) a first plurality of the nozzles have the axes of their bores aligned in a first direction, (e) when ink is ejected through the nozzles, each of the satellite droplets ejected through the first plurality of the nozzles is offset from the main drop ejected through the first plurality of the nozzles in substantially the same direction and at substantially the same distance, (f) a second plurality of the nozzles have the axes of their bores aligned in a second direction, (g) when ink is ejected through the nozzles, the main drops ejected through the first plurality of the nozzles are offset in a different direction from the fire point from which main drops ejected through the second plurality of the nozzles are offset from the fire point.

Claim 52 (New): The apparatus as in any of claims 45 or 50, wherein the nozzle bores are oriented such that they eject ink opposite the direction of travel of the print head when the print head is moving and printing.

Claim 53 (New): The apparatus as in any of claims 45, 50 or 52, further comprising an inkjet print head comprising the inkjet print head chip.

Claim 54 (New): The apparatus of claim 53, further comprising an ink jet printer comprising the inkjet print head.

Claim 55 (New): The apparatus as in any of claims 45, 50 or 52-54, wherein the printhead has large and small nozzles.

Claim 56 (New): The apparatus as in any of claims 45, 50 or 52-55, wherein the nozzle bores are formed in polyimide film.

Claim 57 (New): The apparatus as in any of claims 45, 50 or 52-56, wherein the nozzle bores are cut with an excimer laser.

Claim 58 (New): The method as in any of claims 47 or 51, wherein the nozzle bores are oriented such that they eject ink opposite the direction of travel of the print head when the print head is moving and printing.

Claim 59 (New): The method as in any of claims 47, 51 or 58, further comprising the step of providing an inkjet print head comprising the inkjet print head chip.

Claim 60 (New): The method of claim 59, further comprising the step of providing an ink jet printer comprising the inkjet print head.

Claim 61 (New): The method as in any of claims 47, 51 or 58-60, wherein the printhead has large and small nozzles.

Claim 62 (New): The method as in any of claims 47, 51 or 58-61, wherein the nozzle bores are formed in polyimide film.

Claim 63 (New): The method as in any of claims 47, 51 or 58-62, wherein the nozzle bores are cut with an excimer laser.